REVISED April 27, 2010

THIS IS NOT A REQUEST FOR PROPOSAL

Request for Information (RFI)
for
Arkansas Health Information Exchange (HIE)

Response Due by: May 7, 2010, 3 p.m. CDT

Email Response to:
Alison.nicholas@hit.arkansas.gov

Arkansas Coordinator for Health Information Technology
1401 West Capital, Suite 300
Little Rock, Arkansas 72201

See Schedule of Events for Other Key Dates

Table of Contents

1. PURPOSE

The Arkansas State Health Alliance for Records Exchange (SHARE) is seeking informational responses regarding creation and implementation of an interoperable health information exchange structure for the State of Arkansas. The Arkansas Coordinator for Health Information Technology is seeking this information on authorization from the Arkansas Department of Finance and Administration, the state-designated entity for Arkansas's Health Information Exchange (HIE).

This Request for Information (RFI) is in support of the SHARE mission and vision of supporting the development of a mechanism through which individuals, health care providers, and health organizations can share health-related information. The development of SHARE will advance secure connectivity and serve as a sustainable, interoperable data exchange platform for health-related information. Additional information about Arkansas HIE efforts may be found at the following link:

http://recovery.arkansas.gov/hie/

Responses to this RFI will be received and reviewed completely. ~~A detailed Request for Proposal (RFP) may be prepared and released based on the review of the responses and other information.~~ A demonstration of the proposed solution may also be requested of respondents in addition to the RFI response~~, and as part of the qualifying process~~. ~~If a RFP is issued, it may be sent to selected and qualified respondents.~~

All RFI responses should be sent by email to Alison.nicholas@hit.arkansas.gov.

If questions should arise regarding the HIE RFI or how to submit it, please direct questions by email to Alison.nicholas@hit.arkansas.gov with "RFI Question" in the subject field. All questions and answers will be distributed to all respondents according to the schedule.

2. SCHEDULE OF EVENTS:

Event	Date
Release RFI	April 8, 2010
Deadline for Notice of Intent to Respond	April 15, 2010, 3 p.m. CDT
Vendor Questions Due	April 20, 2010, 3 p.m. CDT
Release Clarifications based on Vendor Questions	April 27, 2010
Vendor RFI Responses Due	May 7, 2010, 3 p.m. CDT
Planning Date for Future Request(s) for Proposal	Not Before September 1, 2010

3. TERMS AND CONDITIONS

1. This RFI and RFI process is solely for SHARE's benefit and are only intended to provide information to SHARE. The RFI is designed to provide respondents with the information necessary for the preparation of informative responses. The RFI is not intended to be comprehensive, and each respondent is responsible for determining all the factors necessary for submission of a response. The RFI response will not be subject to an RFP type evaluation, but only to a review of the information respondent provides.

2. ~~SHARE reserves the right not to review or otherwise to reject, in whole or in part and at any time, any or all responses received in response to this RFI. An RFI response may be rejected outright and not reviewed for any or no reason. Issuance of the RFI in no way constitutes a commitment by SHARE to award any contract or any request for proposal (RFP) for the goods and services described in the RFI.~~

3. SHARE is subject to strict accountability and reporting requirements as a recipient of funds from public sources. Any response or other information submitted by a respondent to SHARE is subject to disclosure by SHARE as required by law, including but not limited to, the American Recovery and Reinvestment Act of 2009 (Public Law 111-5). SHARE makes no agreements or representations of any kind, and expressly disclaims any requirement to maintain the confidentiality of any information provided by respondent in response to this RFI. All material and information provided to SHARE in response to this RFI shall upon receipt become the property of SHARE and will not be returned. (See Vendor Question and Answer #7 regarding Arkansas Freedom of Information Act for further clarification.)

4. ~~By submitting a response, the respondent agrees that SHARE may copy the response for purposes of facilitating SHARE's review or use of the information. SHARE will have the right to use ideas or adaptations of ideas that are presented in the response. The respondent represents that such copying will not violate any copyrights, licenses, or other agreements with respect to the materials submitted.~~

5. ~~SHARE reserves the right to modify this RFI at any time.~~ SHARE reserves the right to contact respondents after the submission of responses for the purpose of clarifying any response. By submitting a response, each respondent agrees that it will not bring any claim, or have any cause of action against, SHARE or any agent of SHARE or the State of Arkansas, based on any misunderstanding concerning the information provided in the RFI or concerning SHARE's failure, negligent or otherwise, to provide the respondent with pertinent information as intended by this RFI.

6. SHARE is not responsible for any costs incurred by a respondent that are related to the preparation or delivery of the response or any other activities of respondent related to this RFI.

4. DESCRIPTIVE INFORMATION ABOUT THE ARKANSAS HIE

The technical infrastructure of the Arkansas HIE will support recognized data standards, code sets, and exchange standards for each component architectural layer. Those layers include technical, privacy and security, administrative context, clinical context, and the Nationwide Health Information Network (NHIN). The HIE will be designed to permit participants (clinical and administrative) to incrementally migrate from a basic exchange to full integration as national, state, and user-based standards and associated technologies evolve. The role of the HIE will be to incorporate data from many sources and formats as standards and technologies evolve to facilitate exchange and to meet national standards.

The HIE will seek to capitalize on existing community, private, and public, health information exchange capabilities to build a statewide HIE. The HIE will participate with other participants in the NHIN to facilitate and promote care coordination with local Veterans Administration, Indian Health Services, public health, and Department of Defense (DOD) military health systems.   (There are no Indian Health Services entities within the State of Arkansas.) As previously mentioned, the HIE will coordinate with Medicare and Medicaid in support of information exchange and interoperability.

4.1 Interoperability

The prioritized focus of the HIE for interoperability and meaningful use criteria will be:

1. **Clinicians** (physicians, nurses, hospitals, clinics, laboratories, pharmacies)

2. **Citizens** (patients, consumers)

3. **Public health** entities, including registries

4. **Payers** (private and public)

It is anticipated that adoption of HIE services will need to be phased in as providers are at varying levels of sophistication related to electronic capabilities. The Strategic Plan and the associated Operations Plan are built upon a proof of concept and a phased approach that is intended to promote implementation of technology and end-user adoption. This phased approach will capitalize to the extent possible on existing technologies and community HIEs within the State and on a scale and schedule that is fiscally sustainable.

The core functionality of the HIE is to provide services for the exchange of structured health care data between certified systems. The HIE will accumulate a Master Patient Index (MPI) and a Master Encounter Index/Record Locator Service. The HIE will standardize and facilitate messages used to request, view, and transmit information and will validate user security. The HIE will provide services to view information via a web-based portal.

While the HIE services will be proven and phased in over time as described in the Operations Plan, it is the goal of the HIE to support sharing these services within and across the HIE upon its completion of the proof of concept phase (2011). Examples of the types of information and structured health care data to be exchanged include:

- Patient demographic information
- Patient vital information such as height, weight, body mass index (BMI), problem list/health issues, care providers
- Medication information to include prescriptions, refill requests, fill status, prescription history, and current medications
- Diagnostic testing information, such as clinical laboratory orders and results
- Other structured clinical summary information
- Public health information, such as immunizations
- Insurance type, identification numbers, payer name, and payer contact information

The Strategic Plan and Operational Plan may have to be updated as the final rules governing Meaningful Use are published in 2010. It is the mission of the HIE to support physicians, institutional providers, and other health constituencies in meeting the requirements for Meaningful Use of health information.

The HIE will coordinate with the State Medicaid MMIS to provide the information-sharing infrastructure for exchange of electronic eligibility, claims, medication ordering and tracking, patient interaction, and quality reporting. As the State Medicaid department advances its selection of the MMIS, the HIE will work directly to provide and support the electronic health information exchange component of that system for Medicaid providers and patients.

4.2   Technical Architecture and Approach

The key overall principles for the HIE are as follows:

1. The HIE will provide an infrastructure that is **secure** and protects the **privacy** of consumers, providers, and other constituents. Participants can be confident that their health care data is secure, private, and appropriately accessed.
2. The HIE will **improve the health care delivery** process in Arkansas by providing information availability when and where it is needed.
3. **Best practices and standards** for information technology infrastructure will be utilized to the extent possible and practical in the creation of the HIE.
4. **NHIN standards** specifications will be implemented in establishment of the NHIN Gateway functionality.
5. The HIE technical infrastructure will attempt to **leverage existing sources of health information** to the extent possible and capitalize on current health exchanges within Arkansas.
6. The HIE architecture will support an **incremental deployment** of a statewide exchange capability.
7. The HIE technical infrastructure will start with **proof of concept** and expand as rapidly as technologically and operationally feasible within the financial constraints of the project.
8. The HIE technical infrastructure will provide **messaging infrastructure** with guaranteed, secure information delivery.

The Arkansas HIE will utilize a hybrid federated architecture of decentralized databases that are connected across the exchange to share and exchange information. A Master Patient Index (MPI) and Record Locator Service will be used to provide patient/record matching services.   The central service "hub" provides MPI, provider index, and record locator services. Data storage is provided at decentralized edge server "vaults" (either physical or virtual).

A high-level architectural schematic is displayed below:
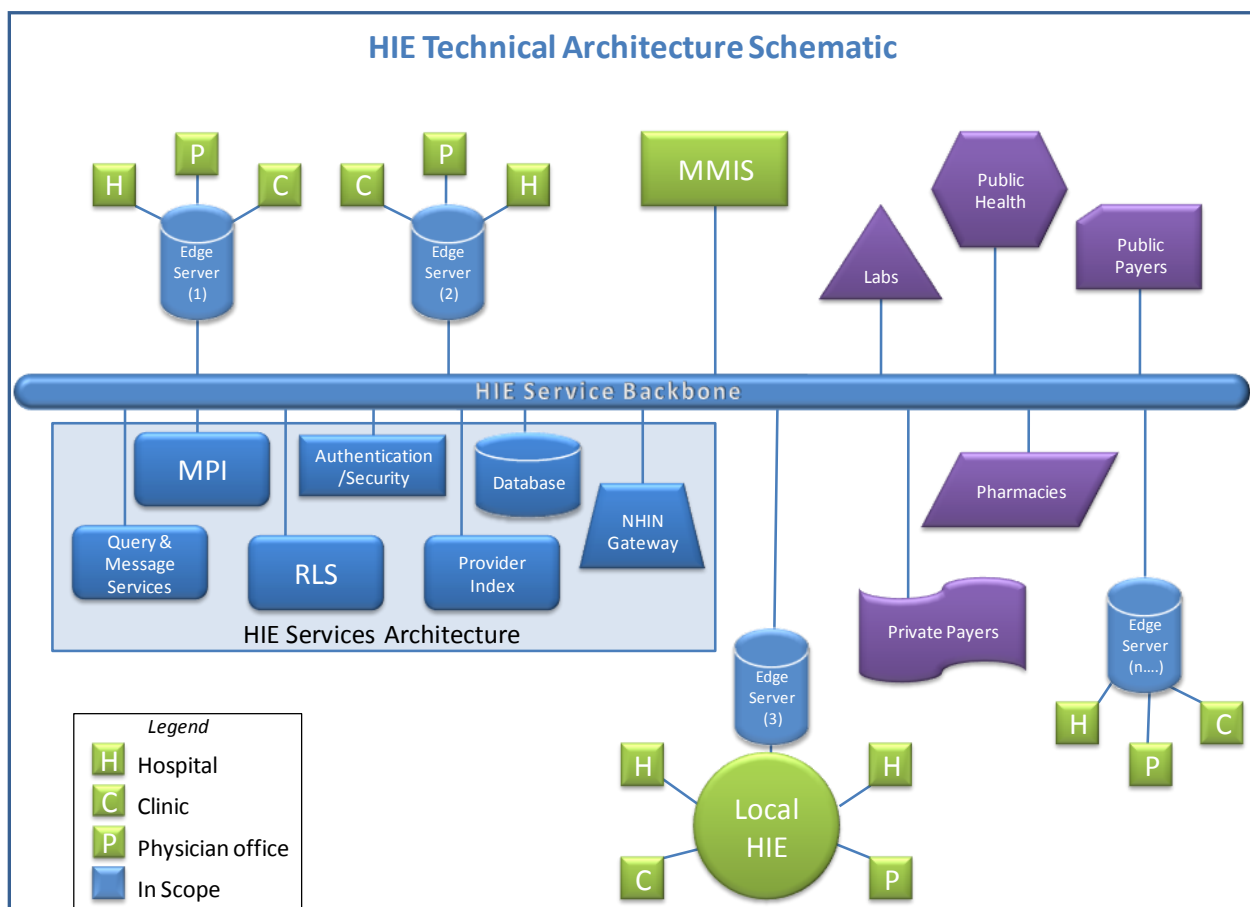
Please note that HIE Services components include the blue HIE Service Backbone and the components included in the blue HIE Services Architecture box. Local HIE clusters can have varying architectures, to meet local requirements. Each local HIE cluster is connected to the HIE Service Backbone as illustrated above.

4.3   Design Principles and Requirements

The following are proposed design principles and requirements for the Arkansas Health Information Exchange:

1. The HIE will be "**vendor neutral,**" i.e., vendor products must be non-proprietary and interoperable with others.
2. The HIE will **rely upon a network**, or infrastructure, to provide service functionality.
3. The HIE will be **a "hybrid" architecture**; not completely federated nor centralized. In the development of a phased implementation, it may be practical to start with a centralized architecture and evolve to a "hybrid" architecture.
4. The HIE will be focused on **facilitating exchange of information**, rather than the end user application functionality.
5. The HIE will support construction and aggregation of the **longitudinal patient record** for secure sharing among authorized users across the network.
6. The HIE will comply with current **interoperability standards** available in the market today.
7. The HIE will **interoperate with existing community and private health information exchanges** as well as the NHIN infrastructure.
8. The HIE technical architecture will be **scalable and expandable**.
9. The HIE will utilize **standard security protocols** supporting user authorization, authentication, non-repudiation, encryption, and administration. It also should support security auditing functions.
10. The HIE will utilize **standard data storage and management protocols** normally associated with large information technology solutions and available in the market today.
11. The HIE will be supported by industry standard **business continuity and disaster recovery** infrastructure and processes.
12. The HIE must be compliant with the **accessibility requirements** as defined in Arkansas Act 1227 of 1999.

4.4   Core Requirements

The HIE core components are as follows:

1. **Master Patient Index (MPI)**: Used to link specific patients to specific data. Includes a Record Locator Service and mismatch reconciliation processes. This component must allow human intervention to manage possible duplication and may create a system assigned Universal Patient Identifier (UPI) used internally.
2. **Data Dictionary and Vocabulary Standardization**: Needed to create a standards-based "data normalization" process for diseases, lab results, diagnosis, and decision support.
3. **Provider Index and Directory**: Used to identify and locate providers (doctors and other providers) based on National Provider Identifier (NPI) validation.
4. **Standards-based**: Utilizes standard communication protocols, nomenclature, and clinical terminology including, but not limited to, HL7 Clinical Document Architecture, SNOMED CT, and ICD-10. Other standards, or evolving standards, are:
   a. SOAP
   b. CCD – Continuity of Care Document
   c. XML, JSON, BSON

d. DICOM
        e. LOINC
   5. **Security:** User authentication, authorization, non-repudiation, encryption, and access control functionality, including audit logging.
   6. **Flexible:** Ability to complete any current and future required HIE competencies.

5. VENDOR RESPONSE INSTRUCTIONS

SHARE is seeking information from as broad an array of interested vendors as possible. Therefore, vendors may respond in a manner that presents a complete solution, or may respond to address particular capabilities represented by their solution. ~~Responses must be limited to not more than the equivalent of 100 standard pages of information. Additional information may be provided as addenda; however, SHARE reserves the right to not consider any supplemental information.~~

5.1 Mandatory Response Requirements

Respondents shall provide the following information:

   1. **Name and Category of Respondent,** such as systems integrator, licensee, service provider, hardware vendor, etc.
   2. **Name of Vendor Representative** responsible for any future business opportunity with the State of Arkansas. Include contact information. General vendor background and corporate information is not required, but may be included in the Addenda.
   3. **Summary Description of Solution**, limited to three pages.
   4. **List of Current Installed Locations** for the recommended solution.
   5. **Estimate of implementation timeline:** Pilot project and broader installation.
   6. **Description of the Financial Business Models supported**.
   7. **Suggested Service Level Agreement terms**.
   8. **Rough Order of Magnitude Cost of Solution Components,** ~~including license fees, third-party license fees, hardware (server and storage), and recurring maintenance fees.~~

5.2 General Solution Description

This section should build on the Summary Description of Solution. It should describe how the solution addresses each of the following elements described in Section 4, Descriptive Information about the Arkansas HIE:

   1. Interoperability
   2. Technical Architecture and Approach
   3. Design Principles and Requirements
   4. Architectural Overview
   5. Core Requirements

5.3 Other Features

In addition to the above, are there any other features, services, or options that SHARE should consider? If so, please describe the feature, service, product, or option, and explain how it would support the HIE functionality as described in this RFI.